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PROPOSED CLASSIFICATION  
OF THE SECTION OF  
ANTHROPOLOGY AND PREHISTORIC ARCHÆOLOGY  
AT THE  
**CHICAGO EXPOSITION,**

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INTRODUCTION.

At the School of Anthropology in Paris Dr. Topinard lectured upon, and has published his most extensive scientific work on what he has called Anthropology General, and by this he means the general features of man, his component parts, his structure and formation, his limbs and various members, his internal organs and their general use. So Dr. Topinard defines his branch of anthropology to be the Study of the Animal Man, as zoology is the science of other animal life.

Anatomic Anthropology treats of the physical constitution of man and studies the characteristics of the skull and brain, and this leads to a division of that into another branch of science, Craniology.

Closely allied to Anatomic Anthropology is Physiologic Anthropology, which, aided by Demography, studies how the different human types live, how they are nourished and reproduced, their muscular energy, the operation of their senses, their maladies, their resistance to pathological influences, the effect upon them of the different climates. And this runs near to, and possibly includes, Comparative

Psychology, which in its turn divides itself into the Linguistic Language and Sociology.

The importance of language as a means of determining the living races can scarcely be estimated. The division of languages (according to their kinds, systems, into monosyllabic, agglutinative and aflexion) have enabled scientists to follow the various races not only through their line of immigration in modern times, but to trace it back into prehistoric times.

Sociology is of great value in its determination of the races of mankind, for it is the social taste that very largely determines the intellectual manifestation—the languages, the arts, the industries, the religions, the sciences. Sociology is a mine of anthropologic lore. It assists not only in determining the race, but it is pre-eminent in determining the domestic, the political life of any particular people after its race shall once have been determined.

This agglomeration of anthropological sciences have thus far had only to do with what might be the modern man. It has not as yet, according to our definition, had any necessary relation to men of antiquity, especially prehistoric antiquity, and this leads to another of the anthropological sciences, Prehistoric Anthropology. In this one may have to use all the other branches of the great science in order to obtain a proper knowledge of the man of that period or epoch. Anatomy, craniology, sociology, and archaeology all combine and are needful, all assist each other in determining the life and history of the prehistoric man. Prehistoric Anthropology deals with man's early existence. It investigates man's industries through the objects thereof. It invades his workshops and his tombs, and in them finds the remains of the man and his family, and the objects made and used by him during his life, and from this determines the life and history of the prehistoric man.

This is my particular branch of anthropological science.

Having proceeded thus far, a new field is opened in regard to Prehistoric Anthropology, which deals with biology of



man and gives rise to questions like the following: How where, and in what form did the first man appear? In what locality? Was there a unity of the human species, or did each race have a separate beginning? The laws of reproduction, of heredity, of the effects of crossing of races or breeds? Suppose the cradle of the human race to have been once discovered, how did the race leave that place? How were the different continents and great divisions of the earth peopled? What were their migrations? How came about the three races of men—the white, the black, and the yellow? Are these differences inherent or are they only the effect of the environment, the exterior agencies? And that leads us further and further into the past, into embryology to evolution, and so back to protoplasm. Thus it would appear as though Anthropology or Anthropological Science comprised nearly everything of education or enlightenment within its grasp.

One branch of Anthropology which I have not mentioned, and which has been discovered only of late years, is that called Criminal Anthropology, or, I suppose a better word for it would be, Criminology.

While in Paris I attended the Second International Congress of Anthropology Criminal. The first one had been held in Rome. There were two schools represented in that congress, and their discussions and investigations were over a question of the highest importance—"Are criminals born or are they made?" One can hardly conceive of the distance to which this study might take the scientist. It includes many branches of the anthropological sciences not heretofore mentioned, and adds to them several that are new. Its first demand is for accurate, extensive, and detailed statistics. It demands to know the names of crimes, the places, the circumstances; the sex, the age, and the degree of instruction of the criminal and his private life from infancy. To this must be added sociologic factors, such as times of poverty, strikes, internal or international political disorders, war, bad harvests, the number of bank-



ruptcies, forms of drunkenness, epidemics, health, temperature. It requires full statistics relating to the country, the individual, to politics, industries, intellectual occupation, religion, and economy. This is followed by examination of individuals of normal characteristics, whether they be physical, intellectual, or moral. The delinquents must be studied in not only their own life from infancy to manhood, but that of their families and their environment through these periods, their heredity, transmission of parental characteristics. With all these for a foundation, one can perhaps establish certain conclusions as to the science of Criminal Anthropology; one can then begin to answer the questions, or, at least, to have an opinion upon this great question: "Are criminals born or are they made."

The Italians were the principal advocates of the theory that criminals were born, that there was in heredity the transmission from father to son, and in the environment of embryology, that which made a man criminal from his birth. On the other hand, the French school combated this, and determined that, whatever of truth there might be in it, there was nothing in the theory of heredity but what the individual could control, that it was his duty to control it, and that his criminal conduct was the result of his education, or attached to him because of the surroundings of his life, possibly from infancy upwards.

This discussion consumed an entire week. Of course there could be no decision of the question; it could not be put to vote; but the discussion and agitation of such questions will set men to thinking over biological and sociological subjects so as to be an advantage to science. The methods recommended for its investigation were as follows: (1) The study of criminality throughout the world, in the past as well as in the present; (2) The causes that produce crime; and (3) The indication and organization of the means by which it might be prevented: Should they be preventative or punitive? Prof. Lombroso, of Italy, stated his proposition thus: As the anatomist will find in the human body



traces of organs that are useless or dangerous, so the anthropologist or the psychologist finds in the social body an instinct which belongs to and was received from his ancestor, a savage of primitive times; that a criminal was a man born so and was from his infancy without moral sense.

In the pavillion, to the left of the Grand Buddha on entering, opposite the pavillion of Denmark, was established the Criminal Anthropology, principally the display of Lombroso and his Italian confreres. It consisted principally of models and casts of criminals, principally the skull and brain, though not by any means confined thereto. There were great numbers of charts and maps and tables of statistics and such works relating to Criminal Anthropology. These were largely the result of the First International Congress of that science, which met at Rome in 1885 and which was continued by the second session in Paris in 1889.

The models and casts were made in a high degree of art. Their accuracy would be the first requirement, but after that they were executed with such a degree of mechanical precision and perfection of coloring as left nothing to desire between them and the originals. Some were moulded in plaster, others in wax, while one was done in bronze. They represented the faces of criminals before and after execution, of the head and of the brain. There were also many, or certainly several, that were intended to represent the differences caused by epileptic and similar diseases. Here could be studied not only the differences in appearance and expression in the living person, but also such alterations as were made by death, and again, the anatomy as developed by a post-mortem examination. There were casts made of the hands of many persons. One particular series commenced with the hand of the giant Kalmuck and ended with that of General Tom Thumb. M. le docteur Vinson presented a large series of casts of the ear. One taking a cursory examination would easily believe that all human ears were different, except those that belong to the same head.



This display of Criminal Anthropology opens a new field for the scientist. The investigations of the Italian criminal anthropologists have thrown a large amount of light upon the differences of conformation in human forms, show many items and instances of differences among men not thought of before, and an amount of statistics and information bearing upon the general subject of crime relating to given forms and appearances in the human being that are well worthy of care and attention, and which should be studied to their utmost limit. The general question may have been propounded long ago, and may have been argued and discussed verbally and in writing among scientists; but here for the first time has it been carried to a profundity, and with a detail and accuracy, that makes results certain and definite and which can be relied on in forming a conclusion, and this I say entirely independent of the correctness of the theory of the Italian school.

In the French Exposition of 1889, the front portion of the Palace of Liberal Arts was devoted to the Anthropological Sciences. A crude idea of it may be obtained by imagining a rotunda or court in the center, open to the roof, surrounded on its four sides by galleries in the first and second stories. The center was filled with groups of prehistoric peoples of the different epochs, while the galleries around were filled with cases and tables which contained the exhibits relating to man. The organization was in the hands of a committee of scientists. Dr. Topinard had the principal direction of that portion relating to *Anthropologie Generale*; M. Cartailhac that portion relating to *Archæologie* and *Anthropologie Prehistorique*, and M. Hamy that portion relating to *Ethnography*. This division was one of theory and science more than of practice, for the objects themselves were not thus divided, and the three gentlemen acted more as a committee than separately.

The Government of Denmark made a special exhibit at its own expense with its own officers in charge, working, of course, under the direction of the committee.



There was an extensive exhibit from Italy, but it pertained more to anthropology pure and simple, or possibly in its relation to crime, than anything else.

Belgium was well represented, and her museums and societies and amateur collectors lent their objects quite freely, and made an elaborate display.

For the benefit of the Chicago Exposition for 1892 I quote from the program for the division of Anthropology, Ethnography, and Archaeology.

Section I.—Anthropology, under the direction of Dr.  
Topinard.

Pieces and specimens of comparative anatomy and embryogeny relative to man. Casts of the brain. Skulls and skeletons, and in their default, casts.

Prehistoric skulls, trepanned skulls, and pathologiques prehistoriques.

Casts of busts and typic masks of the living.

Instruments for physic and physiological observations. Instruments of craniometry and anthropometry.

Charts showing the division and character of races. Photographs of skulls and of ethnic types. Composite photography.

No. II.—Prehistoric Anthropology, under the direction of  
Monsieur Cartailhac.

Material for work and specimens representing the different phases of the fabrications of primitive instruments.

Chipping, polishing, perforation, etc., of objects of stone. Work on bone and on the horn of ruminants. Pieces which bear relation to the practice of art, of design, drawing, etc., primitive pottery.

Views and plans or models of habitations, funeral monuments, antiques, etc.

Casting or hammering of metal, bronze, copper, iron.



Specimens of moulds and objects of metal cast or hammered. Caches the fondeur.

Origin or glass, enamel, etc.

Terms of comparison borrowed from savage populations—fire-making, fabrication of objects of stone, of wood, of bone, of pottery. Comparative Metallurgy.

No. III.—Classic Archaeology, which was somewhat under the general direction of Dr. Hamy, but he was assisted therein by several oriental travelers and scholars: MM. Maspero, Villefosse, Perrot, Solomon Reinach, and others. The division of this section was as follows:

Objects relative to the history of work in antiquity: Egypt, Assyria, Phœnicia, Greece, the Roman Empire, and particularly Gaul, the Extreme Orient, and the New World.

Models, plans, etc., and characteristic constructions. Sculptures and paintings (originals and copies), reproducing the manual art. Scientific apparatus and material for industrial art to the regne de Charlemagne. Specimens representing the different phases of fabrication and collections of characteristic products.

The first section, that of Anthropology General, was a marvelous display. A resume of it shows that there were 115 busts or entire figures of races; 77 pieces or casts of brains; 15 of the hand; 234 skulls, human or their casts, of which 48 were prehistoric or very ancient; a considerable number of paintings, charts, etc., these being all furnished by 71 persons, of which 24 came from foreign countries, among which are named Great Britain, the United States of North America, Brazil, Germany, Austria, Norway, Denmark, Belgium, Switzerland, and Italy.

It would be impracticable to give a complete description of the objects which were here exposed as belonging to this or any other section. That would simply mean to translate a catalogue of many hundred pages.

On entering the front of the building (that side facing the



Seine) the first object which struck the eye in the section of the l'Histoire Retrospective du Travail was the grand Buddha of Nara, which was exposed by Mr. M. L. Bing. It was a gigantic statue of the Japanese Buddha, having the appearance of gold though made of wood, and one of the grandest and largest known. It came from the Ville of Nara, which was the capital of Japan in the eighth century and one of the great centers of the Buddhist religion. "Derriere le Grand Buddha" was the place of rendezvous for all anthropologists during the exposition. This was the gate or door of entrance to the pavillion of the Anthropological science. To the right of the Grand Buddha were the three skeletons, in their original soil, found by Dr. Riviere in the Grotte de Mentone, near Nice, with whom I had formed interesting acquaintance during my residence as consul at that point. The earth was cut around the sides and at the bottom, so as to lift them without disturbance, and then placed on blocks and thus transported to Paris, and are now here displayed. The largest and most important of these skeletons is that at the Jardin des Plantes, Paris. None of these have ever been disturbed or taken out of their native soil as found in the caves.

In the left were the two casts of the Bushmen, which had been presented to the Societe d'Anthropologie in October of 1888 in my presence. One of the men was afterwards cast in full life. He died one month after the casts were taken.

On the outside of the pavillion, to the right and left respectively, were the two cases which contained the objects transported to Paris by me. During the few days when the various congresses in session, there or elsewhere, united themselves for an examination of the prehistoric section of the exposition, each exponent was expected to be at his respective place there to exhibit the objects and make such explanations as might be needed and answer such questions as might be put. I spent the principal or a large part of the time during the week of the meeting of the Congress of



Prehistoric Anthropology in this duty, and spoke so long and so much, answered so many questions, etc., all in French, that I many times grew weary and my jaws tired.

Entering the pavillion we come at once to the subject of Anthropology and all the Anthropological sciences. Dr. Topinard attended on every other day at 10 o'clock in the morning to give instructions and answer questions. The public were invited to be present at the conferences and they became very attractive and interesting as well as instructive.

It would be impracticable to go through this exhibit. There were, as I have said, 213 human skulls, of which 48 were prehistoric. All the charts, maps, and tables used by Dr. Topinard in his lectures were exhibited, and he used them in his explanations.

Standing in the entrance to this pavillion was the exhibit of Dr. Carl Lumholtz, the Norwegian scientist, which consisted of Indian relics from the mounds of Ohio and Minnesota.

Possibly no better understanding could be given of the science of Anthropology as it is believed and taught in France than by giving a description of the maps and charts and tables displayed by Dr. Topinard and used by him before the l'Ecole d'Anthropologie. The following were displayed:

I. Place of Anthropology among the Anthropological sciences.

II. Place of man in the classifications of the Mamniferes.

III. Genealogical tree of the animals up to man, according to Lamerck.

IV. The distance of man from the anthropoides as determined by the weight of the brain and the capacity of the skull.

V. Composite stereographic representation of different races.

VI. An example of the variation of character in a single



human group. This example is taken from the measurements of the cephalic index of 1,000 Parisians.

VII. The average weight of the brain of man in his ordinary condition, but at different periods of his existence.

VIII. The same divided the same way, of men in peculiarly good condition, as of professional men, those of leisure, etc. The excess over the former is ten per cent.

IX. The same of woman. The difference against woman when compared with the ordinary man is four per cent.

X. The curved lines representing the average variation of the weight of the brain in man from fifteen years until his death. Average taken from 1,551 cases.

XI. Classification of the cephalic index by units and also by five units, according to the quinary nomenclature.

A series of charts, sixteen in number, forming a single work, all relative to the color of eyes and hair in France, and giving full statistics.

There were the same kind of charts prepared by other persons. Drs. Collineau, Bertholon and Lelarge giving the division and classification for France, Tunis, and Corsica, showing the index cephalic, the nasal index, the height according to departments and given localities. All these showed the extremes of each characteristic as well as the average.

There was also a chart of the same showing the divisions of the Berber race in Tunis.

There were similar charts and statistics relating to Germany by Dr. Schaaffhausen, of the University of Bonn; of Mr. A. B. Mayer, of Dresden; for Prof. Virchow presented his great chart on the color of the eyes, hair and skin of two millions of school children in Germany taken during the year 1875, showing the percentage, first, of blondes, of brunettes, of brown eyes to blue eyes, of brown hair to blonde hair, and of grey eyes to light eyes.

There were also anthropologic charts from the British Islands, showing practically the same classifications, pre-



sented and prepared by Dr. John Beddow, of Bristol, England.

The same of Norway, by C. Arbo; of Switzerland, by Dr. Coleman.

Also ethnographic charts of Caucasus by Monsieur Emil Chantre; of South Oriental Europe and of Dobrusha, by M. A. Rosny; of Asia, by M. Deniker, Librarian at the Museum of Natural History, Paris, together with his proposed classification of the human race based on their affinities and anthropologic characters. He groups the people of Asia into twenty-six grand divisions and these again according to locality in 200 peoples or tribes.

The two systems of representation were shown, that of Drs. Topinard and Beddow, and the other of Prof. Virchow. The first was represented by the charts of Beddow, Bertillon, Colleneau, Arno, Arbo, and the other by the charts of Virchow, Coleman, and of Belgium. In the first, adults only were reported; in the second, children.

The prehistoric skulls on exhibition amounted to thirty-eight. Among these were all the principal ones, Neanderthal, Solutre, Cro-Magnon, etc.

The celebrated skull from the Grotte de Mentone, those from Laugerie Basse, from the Grotte de Spy in Belgium, and, in fact, the greater proportion of the notable prehistoric skulls found in all France, and probably in the adjoining countries, were exhibited. Those from Spy were taken from their pedestals and exhibited by their discoverers before the Congress of Anthropology and the necessary explanations and descriptions given.

Monsieur Tramont exhibited a series of comparative anatomy of vertebrate animals, consisting of thirteen skeletons. They were arranged to show the relationship between man and these animals, and, commencing in the reverse order, they were a man, a chimpanzee, an ourang, a monkey of the ancient continent, one of the new continent, a Limure, a bat, a lion, a kangaroo, a reptile, and two fish,



and along with it was another series of five pieces showing the evolution of the brain from the fish to the man.

The same of the foot and hand, showing the same kind of series from man down; five pieces.

Another of the brain. This was represented by twenty-six pieces, ten of which represented the structure of the brain, two its exterior part, and eleven its convolutions.

Capitan presented an exceedingly interesting series relating to prehistoric trepanation. There were a number of prehistoric skulls bearing evidences of trepanation. One, a human, which bore upon its right side a deep circular groove which was cut out or excavated; the circular piece was intended to be taken out. Another, a recent human skull, ~~in~~ which all the different processes, or the process of prehistoric trepanation in its various stages, were shown, the cut made deep, a portion of it taken out, and, finally, the entire piece taken out. This operation was performed by Dr. Capitan and for the purpose of showing how it might have been done in prehistoric times. The implements with which it was performed were all laid by the side of the skull. They were the knives and scrapers of sharp flint, pieces of wood and bone to support them, and by which the trepanned piece could be lifted out.

There were also skulls of dogs, one of which had been trepanned after his death; another, during his life; he lived after it three weeks. Again another, which had the same operation performed and lived six weeks; another, six months. These dogs had all been cured of the operation and were in a situation to live as long as they might. They were then killed for the purpose of obtaining the necessary information concerning the operation. The results were such as to show that the implements and instruments used produced a trepanation identical with those which we observe on the prehistoric skulls.

This display of Dr. Capitan was supplemented and made much more interesting by nearly all the genuine and original trepanned skulls from all France.



A fine representation was made of the collection of M. H. H. Risley, who was the Director of ethnography at Bengal. His collection comprised about six hundred objects and gave as complete a representation of Ethnography in India as possible.

Belgium made an exceedingly fine display of the same kind, comprising the great discoveries of Monsieur Fraipont and Lohest in the Grotte de Spy relating to the paleolithic period.

Italy's display in this regard was devoted principally to Criminal Anthropology. It occupied almost the entire room in the center on the left-hand side of the pavillion. Dr. Cunningham, from the medical branch at Dublin, made a presentation of twenty pieces, which had been prepared by him in the excellent and much-to-be-commended manner of those now shown in the Army Medical Museum and made by the same process.

Probably the most important, the most unique and valuable contribution in relation to anthropologie prehistorique, was made by the National Museum of Rio Janeiro in Brazil. It consisted of nine skulls of prehistoric men, the principal being that of Lagoa Santa, which were discovered now fifteen or more years, by Lund, during his residence in that country, by him taken to Copenhagen, fifteen in number, and lately published by Dr. Soran-Hansen. Other prehistoric skulls of the same country and part of the same exposition were those from the shell-heaps of Parama, St. Cathariul, etc.

The prehistoric man of Caucasus was represented by the collection of Monsieur Chantre, who has made such studies in that country, the results of which have been lately published in his extensive work.

It goes without saying that this Exposition was filled with all the necessary descriptive charts and casts, colored plates, characteristic subjects for study of anatomy and the human form, but they cannot be mentioned here. It also goes without saying that there were extensive repre-



sentations of the islands of the Pacific and Indian Oceans. All the races and peoples of these various islands, Oceanica, Australasia, Fuego, Caledonia, Australia, etc., were represented.

Complete series of instruments of craniometry and anthropometry were exhibited. Those by Mathieu, Collin, Tramont, Molteni, Colas, by Mr. Francis Galton of Great Britain; also those by Dr. Gillet de Grandmont, by Hamy of the Ethnographic Musee of the Trocedaro, Demeny of the College de France, Dr. Luigi Anfosso and others from Italy, and not to be forgotten was that of Dr. Benedikt of the University of Vienna. He has just published a work upon that subject of craniometry.

Anthropometry and craniology may not have been able to classify the races of men in either a perfect or approved manner, and so some of our anthropologists have been led to oppose it. But it is of immense importance. I will not say the greatest, but certainly of such importance as that it ought not to be overlooked or allowed to fall into disuse. For this reason I may be excused if I give a short description of some of these exhibits of the instruments used for this purpose. I have taken that of Mr. Francis Galton. The most I can do is only to give a condensed catalogue of the instruments which he had for that purpose:

1. Spirometre to measure the capacity of respiration.
2. Dynamometre for the hand.
3. Dynamometre for the arm.
4. A series of colored wools to be used testing the candidates in color-blindness.
5. A rule to determine the individual aptitude to measure and divide distances, to divide angles. Another to test the aptitude or capacity for judging of weight.
- 9, 10, and 11. To test the capacity of the ear to detect differences in sound.
12. An apparatus to measure an interval and the difference in its detection between the eyes and the ear.

There was to be added to this list other instruments



which were not present because of their weight and their not being necessary—the scales, the measure of height, the measure of the length of arm, the compass, and the models for establishing the color of the eyes and hair.

The display of Monsieur Mathieu, a mathematical-instrument maker on the Boulevard St. Germain, near to the l'Ecole de Medicine, consisted principally of instruments made after the system of Broca; the compass for measuring thicknesses, having small balls upon the end and the graduating arm marking millimetres; a sliding compass marked in the same way; divers goniometres; a craniostat, with its needles for measuring orbits; the endometre, the crochet occipital, and of the objects found, the tropometre, the apparatus for taking the cubic contents of skulls.

The apparatuses in use in the police department by Monsieur Alphonse Bertillon, were also displayed by their maker, Monsieur Colas. They consisted of:

1. Scale for measuring the height standing.
2. Scale for measuring the height sitting.
3. Scale for measuring the outstretched arms.
4. The compass of Monsieur Bertillon, or
5. The sliding compass to measure the elbow, length of the foot, palm of the hand.
6. Small compass to measure the fingers and the ears.

The display of anthropometric instruments made by Dr. Topinard was more interesting as an illustrated history of the science than for actual use. He exhibited the various kinds, the earliest that were used, their changes, their improvement, etc., and the different methods of measuring skulls—those employed by Messieurs Rankes, Thann, Holder, Virchow, and, of course, that of Broca.

Dr. Hamy exhibited a set of instruments for the use of travelers packed ready for transportation. They were to be used in measuring the living person, usually the savage among which the traveler might pass. These consisted of the various compasses, the measures, etc., together with the tables that were to be used in transcribing them.



The foregoing, which might be classed as an introduction to my proposed classification for the Chicago Exposition, is really an argument showing the necessity for an extended and elaborate display of the science of Anthropology. I do not continue this argument into the branch of prehistoric anthropology or prehistoric archaeology. If I have been successful thus far, the archaeological part will follow; if I have not been successful, no further argument of archaeology will have much weight with the committee. I proceed now to that which is the classification proper. After the chapter or division devoted to Anthropology follows in considerable detail the division of Prehistoric Anthropology, and its sections are drawn in such detail as to obviate any necessity of explanation or argument, such as the foregoing.

## I. ANTHROPOLOGY.

Comparative anatomy in relation to man:

Skeletons—ancient or modern:

Casts or photographs.

Craniology:

Capacity.

Congenial deformities.

Artificial deformities, and the analytic measurement thereof.

Microcephalic skulls.

Skulls of human races.

Skulls of criminals.

Skulls of anthropoids.

Cerebral morphology:

Sections of the brain of man; thence in the descending scale, to the gorilla, oran-utan, chimpanzee, and as far as necessary to form a complete series.

Brains of idiots, imbeciles, criminals, and anthropoid pathologic specimens.



Intra-cranien topography.

Histology of cerebral convolutions.

Osteology:

Long-bones of various races and animals.

Hyoid, ditto.

Platycnemy.

Myology:

Extremities—hands and feet—of various races of the animal kingdom.

Splanchnology:

Viscera.

Anthropogeny or Comparative Embryology.

Physical characteristics:

Anthropometry:

Size, weight, and proportions of human body—charts showing.

Instruments for determining same.

Descriptive characteristics:

Color of skin.

Color of eyes.

Color of hair.

Features.

Physiological and pathologic characteristics.

Anthropologic types:

By cephalic index:

Dolicocephalic.

Mesocephalic.

Brachycephalic.

By dental index:

Microdont.

Mesodont.

Megadont.

By color of skin:

Caucasian, white.

Mongolian, yellow.

Ethiopian, black.

By form and color of hair:



Ulotriches (wooly hair) and  
Lissotriches, or  
Leiotriches (smooth hair).

By unity of characteristics:

Leptorrhine.

Messorrhine.

Platyrrhine.

## II. PREHISTORIC ANTHROPOLOGY.

Eastern Hemisphere:

Human remains:

Skulls of standard types representing the prehistoric ages of stone, bronze, and iron—Neanderthal, Canstadt, Cro-Magnon.

Long bones.

Human industry:

Specimens of material used by prehistoric man.

Specimens representing the different phases of fabrication of prehistoric implements—chipping, polishing, grinding, drilling, etc.

Prehistoric implements and objects, whether for use or decoration, classified according to epoch, locality, and function. Art products.

Stone Age:

Paleolithic period:

Chellean epoch.

Acheulean epoch.

Aluvium.

Mammoth.

Mousterian epoch.

Solutrean epoch.

Magdalenian epoch, or

Cavern period.

Neolithic period.

Bronze Age.

Iron Age.



## Metallurgy:

Moulding, casting, and hammering of metals, copper, iron, and bronze.

Specimens of moulds and objects from prehistoric foundries.

Pottery—arranged according to locality and epochs.

Views, plans, or models of prehistoric architectural monuments and habitations:

Caverns, natural:

Dwellings.

Sepulchral.

Caverns, artificial:

Dwellings.

Sepulchral.

Lacustrine dwellings:

Dolmens.

Tumuli.

Menhirs.

Cromlechs.

Alignments.

Cup stones.

Graves, cists.

Crematories.

## North America:

(Note.—The following system of classification was prepared by Dr. Rau and Prof. Mason several years ago. It is very elaborate, but will answer the present purpose.)

## I. Man.

Desiccated bodies.

Skeletons.

Skulls.

Other parts of skeletons.

Casts of Indian heads in plaster, wax, and papier mache.



Photographs, drawings, and paintings of aborigines and of scenes of aboriginal life.

## II. Culture.

### (1.) Aliment, etc.:

#### A. Food:

##### 1. Mineral food:

Salt.

Clay (mixed with food).

##### 2. Vegetable food:

###### (a.) Unprepared.

Roots.

Bark.

Buds.

Flowers.

Fruits.

Seeds.

###### (b.) Prepared.

Sugar.

Preserved fruits.

Meal.

Mush.

Bread or cake.

##### 3. Animal food:

Dried and smoked meat of mammals, birds, and reptiles.

Dried and smoked fish.

Dried fish-eggs.

Roasted and dried insects and worms.

#### B. Drink:

##### 1. Decoctions:

Teas, etc.

##### 2. Fermented drinks:

Cider, wine, and liquor.

#### C. Narcotics:

Tobacco and its substitutes.



## D. Medicines:

## 1. Mineral medicines:

Earths, etc.

## 2. Vegetable medicines:

Herbs.

Roots.

Buds.

Flowers.

Seeds.

## 3. Animal medicines:

Pulverized bones, etc.

## (2.) Habitations:

## A. Skin lodges.

## B. Models of dwellings:

Shelters.

Skin lodges.

Yourts.

Huts (of bark, grass, etc.).

Wooden houses.

## C. Appurtenances:

Sweat-houses (models).

Totem-posts (originals and models).

Gable ornaments (carved).

Locks (wooden).

## (3.) Furniture:

Mats (of bark, grass, flax, etc.).

Screens.

Hammocks.

Bed-coverings.

Head-rests (Hoopa Indians, California).

Cradles.

Cradle-boards.

Chairs.

Stools.

Washing-vessels.

Tubs.



Pails.

Boxes.

Chests.

Lamps.

Brooms.

Fly-brushes.

(4.) Vessels and other utensils for household use:

A. Raw material:

Stone.

Clay.

Roots.

Grass.

Bushes.

Osiers.

Splints.

Wood.

Horn.

Skin.

Membrane.

Dyes and cements (for baskets, etc).

B. Earthenware:

Cooking vessels.

Ollas

Spherical jars.

Small-necked jars.

Canteens.

Pitchers.

Dishes.

Trays.

Bowls.

Cups.

Ladles.

Spoons.

Ornamental vessels.

Carved horn and wooden ware:

Four-sided vessels.

Trays.



Dishes.

Bowls.

Cups.

Dippers.

Spoons.

Ladles.

Stirring-sticks.

D. Carved stone-ware:

Plates.

Trays.

Dishes.

Bowls.

Cups.

E. Water-tight and ordinary basket-work:

Cups.

Bowls.

Flasks.

Carrying-bottles.

Baskets of various forms.

F. Bark vessels:

Trays.

Bowls.

Pails.

G. Gourd vessels:

Cups.

Bowls.

Carrying-bottles.

H. Skin and bladder bottles.

(5.) Articles serving in the use of narcotics:

Pipes.

Tobacco-pouches.

Cigar-cases.

Plates for cutting tobacco.

Snuff-grinders.

Snuff-scrapers.

Snuff-boxes.

Snuff-tubes.

## (6.) Receptacles used in transportation:

## A. On foot:

Pouches.

Burden-straps.

Burden-nets.

Burden-baskets.

## B. With beasts of burden:

Bags.

Raw-hide cases.

## (7.) Clothing:

## A. Raw material.

Fur.

Raw-hide.

Wool.

Hair.

Vegetable fibre.

## B. Complete suits (in part exhibited on lay figures).

## C. Head clothing:

Hats.

Caps.

Hoods.

Head-scarfs.

## D. Body clothing:

Robes.

Blankets.

Mantles.

Capes.

Skirts.

Tunics.

Coats.

Clouts.

Aprons.

Shirts.

## E. Hand clothing.

Mittens.

Gloves.



## F. Leg and foot clothing:

Sandals.

Moccasins.

Shoes.

Boots.

Socks.

Stockings.

Leggins.

Garters.

## G. Parts of dress:

Bands.

Belts.

## (8.) Personal adornment:

## A. Head ornaments:

Wigs.

Chignons.

Hair-pins.

Tucking-combs.

Head-bands.

Feather head-ornaments.

Labrets.

Nose ornaments.

Ear ornaments.

## B. Neck ornaments:

Necklaces.

Neck-bands.

Collars.

## C. Breast and body ornaments:

Gorgetts.

Ornamental girdles.

## D. Limb ornaments.

Rings.

Bracelets.

Armlets.

Anklets.

## E. Toilet articles:

Substitutes for soap.

Paints (mostly mineral).

(Paint-mortars.)

Spatulae (for face painting).

Hair-powder.

Hair-dye.

Combs.

Head-scratchers.

Tweezers for removing the hair.

Mirrors.

(9.) Implements for general use, for war and the chase,  
and for special crafts and occupations:

A. Implements for general use:

1. For striking:

Hammers and mauls.

2. For cutting, sawing, perforating, etc.:

Knives of various forms.

Hatchets.

Adzes.

Chisels.

Gouges.

Wedges.

Scrapers.

Skinning implements.

Saws.

Drills.

Awls.

Cutting-blocks.

Tool-boards.

(Tool-boxes.)

(Whet-stones.)

B. Implements for war and the chase:

1. Striking weapons:

War-clubs (with or without metallic points;  
or stone weights).

Tomahawks.



Boomerangs (Moquis, etc.).

Bolas.

3. Thrusting weapons:

Knives.

Daggers.

Swords.

Lances.

4. Projectile weapons and appurtenances:

Arrows.

Bows.

Quivers.

Wrist-guards.

Harpoons and throwing-boards.

Slings.

5. Defensive weapons:

Shields.

Helmets.

Visors.

Body-armor.

C. Implements for special crafts and occupations:

1. Implements for hunting other than weapons:

Snares and traps.

Nets.

Hooks for catching small animals.

Decoys.

2. Implements for fishing other than weapons:

Hooks and lines.

Sinkers and floats.

Nets.

Traps.

3. Implements and utensils used in gathering and manufacturing food:

Root-diggers.

Gathering and winnowing trays.

Mortars and pestles (of wood and stone).

Stone troughs or slabs with rubbing stones.

4. Agricultural implements:

2. Throwing weapons:

Spuds.

Hoes.

Rakes.

Reaping-hooks.

5. Implements for fire-making:

Fire-sticks and drills.

Flint with steel and pyrites.

Moss.

Punk.

Tinder.

Slow-matches.

Fire-nests.

Fire-bags.

6. Implements for arrow-making:

Chipping-tools.

Shaft-grinders.

Shaft-straighteners.

Glue-sticks.

7. Implements for making pottery:

Paddles.

Smoothing-stones.

8. Implements for twisting, spinning, weaving, sewing, and embroidery:

Fibre-twisters.

Spindle-whorls.

Reels.

Knitting-needle.

Looms with woof-sticks and shuttles.

Awls.

Needles.

Needle-cases.

9. Implements for basket-making:

Plaiting-tools.

10. Implements for working skins:

Scrapers.

Skin-softeners.

Burnishers.



Crimping-tools.

11. Implements for carving:

Knives.

Gouges.

12. Implements for painting (including paints):

Bristles.

Paint-sticks.

Brushes.

Rubbing-stamps.

(Paints.)

(10.) Means of locomotion and transportation:

A. By land:

1. Traveling on foot:

Ice-creepers.

Snow-shoes.

2. Conveyances, etc.:

Saddles.

Bridles.

Halters.

Stirrups.

Spurs.

Foot-mufflers.

Dog-harnesses.

Reindeer-harnesses.

Sleds.

Sleighs.

B. By water:

Balsas.

Dug-outs.

Bark canoes.

Bull-hide boats.

Kayaks.

Oomiaks.

Pushing sticks.

Paddles.

Oars.

Bailing-vessels.

Spear-rests.

(11.) Games and pastimes:

A. Gambling implements:

Pairs of bones and sticks.

Bundles of sticks.

Dises.

Dice.

Ivory blocks and catching-sticks.

Cards.

Chess.

B. Dancing:

Plumes.

Wooden masks and head dresses.

Buffalo head-masks.

Head-shields.

Hip-ornaments.

Rattles.

Batons.

Spears.

Scalps.

C. Athletic exercises:

Rackets.

Sticks.

Poles.

Balls.

Rings.

Boundary-sticks.

D. Children's sports and toys:

Dolls.

Whirligigs.

Tops.

Miscellaneous toys.

(12.) Music:

A. Instruments for beating and shaking:

Drums.

Sounding-bars.

Rattles.



Clappers.

B. Rubbing and stringed instruments:

Notched sticks.

Cane harps.

Cane fiddles.

C. Wind instruments:

Whistles.

Fifes.

Flutes.

Trumpets.

Horns.

D. Whizzers.

(13.) Art:

A. Pictorial representations and ornamental designs of wood, bark, bone, horn, ivory, dressed skin, and leather.

B. Carvings in stone, wood, horn, bone, and ivory.

C. Embroidery and other ornamental work with quills, colored threads, hair, feathers, and beads.

(14.) Enumeration, etc.

Census-sticks.

Dunning-sticks.

(15.) Objects relating to superstitions:

Idols.

Charms.

“Medicines.”

Medicine bags.

Medicine boxes.

Batons.

Rattles.

Drums.

(16.) Objects relating to funeral rites and burials:

Mourning-yokes.

Mourning-bracelets

Dead-masks.

Burial-frames.

## COLONIAL EXHIBITS AT PARIS EXPOSITION.

That which was to me the most interesting possibly of any in the French Exposition was the colonial display in the Esplanade des Invalides. The French Government possessed peculiar advantages in this direction; the Exposition was determined upon four years before its opening. It thus had ample time in which to communicate with its most distant colonies and to make extensive and complete preparations. The colonial officers were instructed to make such preparations as was deemed wise. Each director was appointed and the organization was perfected with an offer to certain chosen natives of a trip to Paris to spend the summer, and to be taken care of by the Government, to see the great Exposition, and finally to be returned home, all under the auspices and at the expense of the Government. This was an opportunity not to be disregarded even by the savage in the south of Africa or the South Sea Islands. The directors chosen were men of judgment and discretion who had resided in the country. They could speak both languages and they were thus fully equipped and competent to assume command of such an expedition.

The accompanying tracing shows that portion of the esplanade occupied by this Colonial Exhibit, and I have given a list of the colonies and peoples there represented. They were not merely single individuals nor yet a single family, but whole towns or settlements, some of which numbered sixty persons. Java had sixty, Cairo had sixty white asses with as many bare-legged boys for keepers; Java, Algeria, Tunis, Annam, and Tonkin each had from forty to sixty aborigines present.

Extensive expeditions had been organized and conducted by various nations or by generous and public-spirited citizens to foreign parts that the people and their habits and customs might be studied, and large and expensive books have been published in the forms of reports of the visiting



traveler, historian, or scientist, but here were spread out before his eyes many of these peoples with their huts, cabins, families, household and domestic paraphernalia all in place and they occupying them as though in their own country.

Algeria:

Grand palace.

The Aissaouas.

Tunis:

Souk, or Bazar—sale of products.

Forestry exhibition.

Djend products.

Arabia:

Cafe and restaurant.

Shops for sale of products.

Madagascar:

Shop for sale of products.

Tahite:

Pagoda of Villenour.

Pavillion, Hindoo.

Tower of Salde.

Annam and Tonkin:

Miradore.

Tomb.

Shop.

Drinking stands.

Restaurant.

Hot house and plants.

Theatre.

Senegambia:

Tasting shop.

Village of Affourou.

Village of Pahoun.

Bazar—sale of products.

House of the chef—canaque.

French Guiana:

Gaboon.

Cochin-China:

Palace.

Village.

Shops—sale of products.

Pagoda of Ankor.

Guadeloupe.

Martinique.

Village, Javanese:

Cocoa factory.

Vun Houton.

Cafe, Bambarra.

Restaurant, Creole.

On the rue de Cairo were buildings of the following countries:

Egyptian bazar.

Morocco.

Siam.

Romania.

China.

India.

While a similar display to this might not be made at Chicago, of the same persons nor from same countries, or even those neighboring; yet a most wonderful display could be gotten up with this for a pattern. I mean to devote a park to the occupation by our Indian tribes showing an entire family of each Indian tribe with all its outfits and belongings. The size and number of these could be determined by the Committee of Organization.

The Ethnologists of North America have decided that we have varying from fifty-nine to seventy-eight different stocks of Indians and these have again been divided into about two hundred tribes. As a matter of course it would be inutile to have representation from all these, but as I stood on the Esplanade at the French Exposition and looked over this Colonial display of so many different peoples, I thought what a magnificent opportunity the American people could have at their Chicago Exposition. A



representative stock or tribe could be selected and an entire settlement showing it in every phase of its tribal life could be brought to the Exposition grounds and there set up and displayed in all its aboriginal verity. This display might be extended indefinitely and I have no means of determining the detail to which it might not be pushed with advantage. Since my return I have consulted with the Commissioner of Indian Affairs, General Morgan, and explained the scheme to him. He pronounces it entirely feasible, says that he possesses the necessary machinery and organization for making the display in as great an extent and with as much completeness and detail as might be desired. In view of my experience as I stood in the presence of these savage or semi-civilized people brought from the uttermost parts of the world, entirely new and strange to me, I venture to recommend to the Committee, with all the influence I possess, that they should adopt this or a similar scheme and thereby inaugurate one of the most attractive, interesting, and important sections of their Exposition.

### HUMAN HABITATIONS.

One might doubt the propriety of attempting to display at Chicago the human habitations of classic antiquity such as are given in some portions of this classification. But there are many which might with great propriety be there displayed. All the prehistoric habitations might be shown and they would be exceedingly interesting and attractive. The casts of the pueblos which we have at the National Museum, the representations of the cave dwellers, cliff dwellers, and others from our own country and from Mexico and Central America might be displayed. The wigwam of the Indian and a few of the Eskimo might also be shown unless they should come in in another section along with the living occupants.

I have not labored over this question of human habitation more than to make it as a suggestion or offer. If it

should be the intent of the Committee to make such a display, I would take pleasure in completing it.

## I. PREHISTORIC PERIOD.

Natural shelters:

In the open air:

Under wood:

In hollow trees.

Under logs.

Under rocks:

Rock shelters.

Example, Laugerie Basse.

Constructed habitations:

On land:

Caverns, natural.

Example, Mentone.

Caverns, artificial.

Example, on the Loire and Correze.

Cliff-dwellers, Arizona, and New Mexico.

Pueblos, Arizona, and New Mexico.

Ancient cities and towns.

Earth-works.

Village sites.

Homes, exterior and interior.

Temples.

Tombs and shrines.

On water:

Lacustrine dwellings:

Ancient, Switzerland.

Scotland.

Modern, Louisiana.

## II. HISTORIC PERIOD.

### 1. Primitive civilizations:

Egyptians—4000 B. C. to 525 B. C.

Assyrians—3 or 2000 B. C. to 538 B. C.

Phonicians—2000 B. C. to 332 B. C.

Hebrews—Nomads, tent-dwellers in Mesopotamie to the times of the Patriarchs, then sedentary in Palestine from 1500 B. C. to 70 A. D.



Pelases—From an undetermined epoch until 900 B. C.

Etruscans—From an undetermined epoch until 400 B. C.

2. Civilizations growing out of the Arian invasion:

The Arians, according to our earliest knowledge of them, were established on the plateaux between the Caspian Sea and the Himalaya Mountains. There has been much discussion over their origin and migration, with but small advancement in real knowledge. Their migrations commenced as early as 1500 B. C. and continued until about 500 B. C. They were toward the southeast, southwest, and west.

Hindoos—1500 B. C. to modern times.

Persians—538 B. C. until 330 B. C.

Germans—1400 B. C. to the eighth century A. D.

Gauls—1200 B. C. to first century A. D.

Greeks—1000 B. C. to 200 B. C.

Romans—From 752 B. C. to fifth century A. D.

The Roman Empire was divided in 395 A. D. into the Eastern and Western, which developed distinct architectural habitations.

Eastern Empire:

This existed for ten centuries, from the fourth to the fifteenth A. D.

Byzantine—Fourth to fifteenth century A. D.

Slavs—Fourth to tenth century A. D.

Russian—Ditto.

Musselman invasions:

Arabian—632 to 1058 A. D.

Turkish—1058 to the present.

Soudanese—Tenth century to the present.

Western Empire:

The Roman civilization was here affected by several invasions:

The Huns—350 to 450 A. D.

The Germans and Franks, contemporaneous with the Gallo-Roman epoch of the sixth and seventh centuries A. D.

The Scandinavian or Norseman—Ninth century A. D.

As a consequence of these invasions a transformation took place in the civilization and races of the Western Empire in Western Europe, notably in England, France, Germany, Italy, which, especially in France, can be divided thus:

Romance—Seventh to tenth century A. D.

Middle ages—Tenth to fifteenth century A. D.

Renaissance—Fifteenth century A. D.

3. Civilizations contemporaneous or corresponding to the primitive civilization:

These, while possessing a certain degree of civilization which was particularly their own, did not enter into relations with the civilized nations of Europe or America, and have no, or but slight influence thereon.

China—5,000 years B. C. discovered by, or known in the fourteenth century A. D.

Japan—Origin uncertain, known to Europeans in sixteenth century A. D.

Eskimos and Lapps—Same, known to Europeans since tenth century.

Africans and Australians—Discovered by Portuguese fifteenth century A. D.

## LINGUISTICS.

Spoken languages, charts showing:

Formation.

Classification.

Distribution.

Migrations.

Relations.

Written languages of all nations, with examples from ancient times.

Pictographs:

On dolmens and stone monuments of Western Europe.

Scandinavia,



North American Indian.

Mayas.

Mexican.

Easter Island.

Messages:

Sticks, feathers, knots, etc.

Hieroglyphics:

Cuneiform:

Sumero-Akkadian.

Babylon.

Assyrian.

Persian.

Scythian.

Egyptian.

Hittites.

Chinese.

Alphabetic:

Semitic:

Phenician.

Punic.

Neopunic.

Ancient Hebrew.

Aramean:

Nabatean.

Palmyrene.

Hebrew Carre.

Syria.

Arabic.

Himyarite.

Ethiopian.

European:

Etruscan.

Greek Archaic.

Latin Archaic.

Scandinavia.

Runic stones 1st and 2d period.

Ogham stones from Ireland.

Gaul.

Saxon.

British.

Hindoo:

Sanscrit.

Bactrian.

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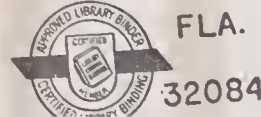






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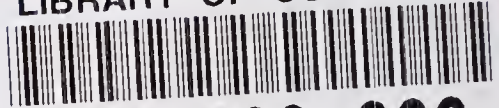
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